



**Monitoring Weather, Climate  
and the Environment**

**Presentation to Hungarian Industry  
19 January 2009**



# EUMETSAT's Mission is....

To deliver operational satellite data and products that satisfy the meteorological and climate data requirements of its Member States - 24 hours a day, 365 days a year, through decades.

This is carried out taking into account the recommendations of the World Meteorological Organization (WMO).



# Data Applications



**To assist the human forecaster in diagnosing and monitoring the development of hazardous weather systems...**



**For daily weather forecasting, to save human life and property...**



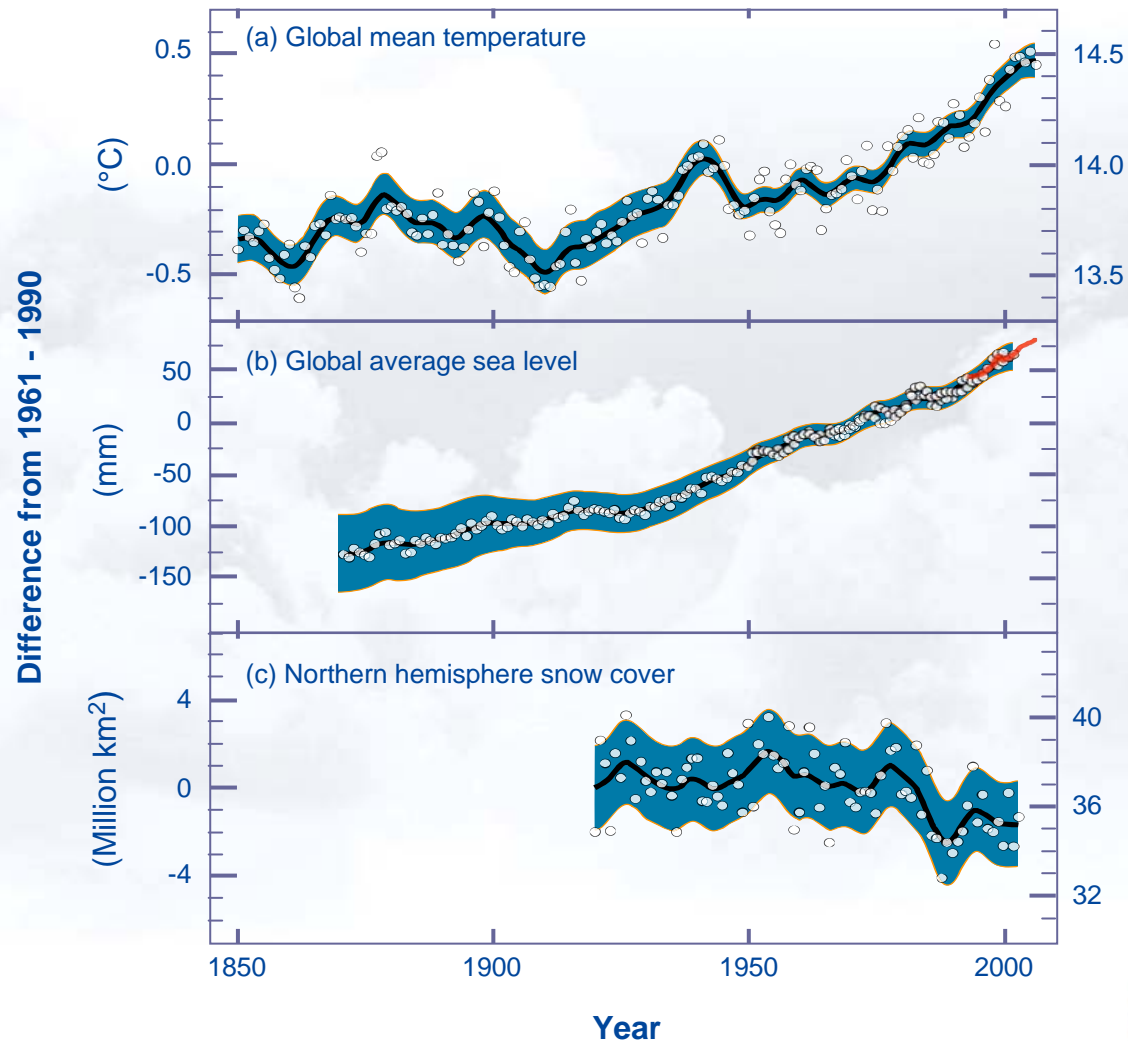
**For industry, aviation, maritime transport ...**



**... and for climate and environmental monitoring.**

# Change in Temperature, Sea Level and Northern Hemisphere Snow Cover

Source: Intergovernmental Panel on Climate Change

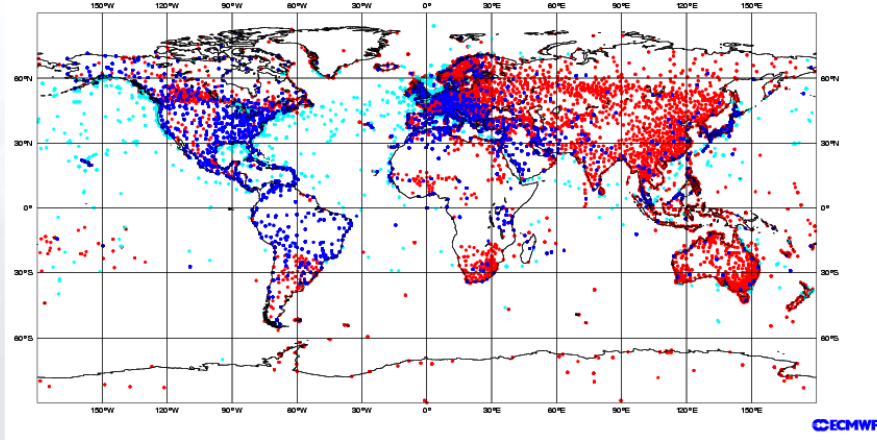




# Why satellite data?



24/OCT/2007; 00 UTC  
Total number of obs = 28036

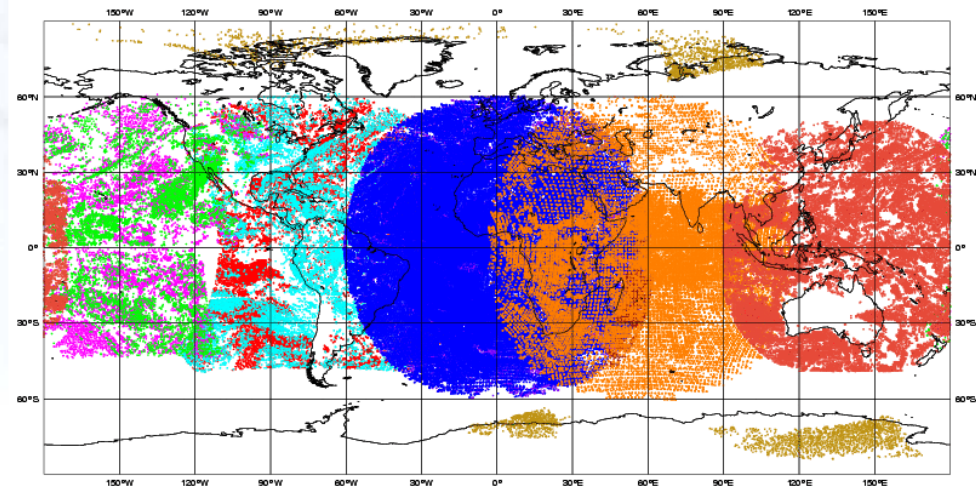


Conventional network

## Geostationary satellite coverage

- Observations on a global basis
- Unaffected by local weather systems
- Complements in-situ weather stations, weather balloons etc.

29/OCT/2007; 00 UTC  
Total number of obs = 292633





# Providing Socio-Economic Benefits

Weather satellites are vital to better manage our planet's resources and ensure basic societal benefits

- Weather:** sever storms, dust storms, sea surface temperature, aviation, ship routing, fishing
- Disasters:** tropical cyclones, ocean storm surge, flash floods, tsunami
- Health:** extreme heat, smog, smoke pollution/inhalation
- Energy:** oil fires, excessive demand for air-conditioning, water
- Climate:** land and sea surface temperature change, rising sea level, monsoon change
- Agriculture:** water shortage, pest infestation
- Ecosystem:** impact of environmental change on fish stocks

# Benefits for public administrations

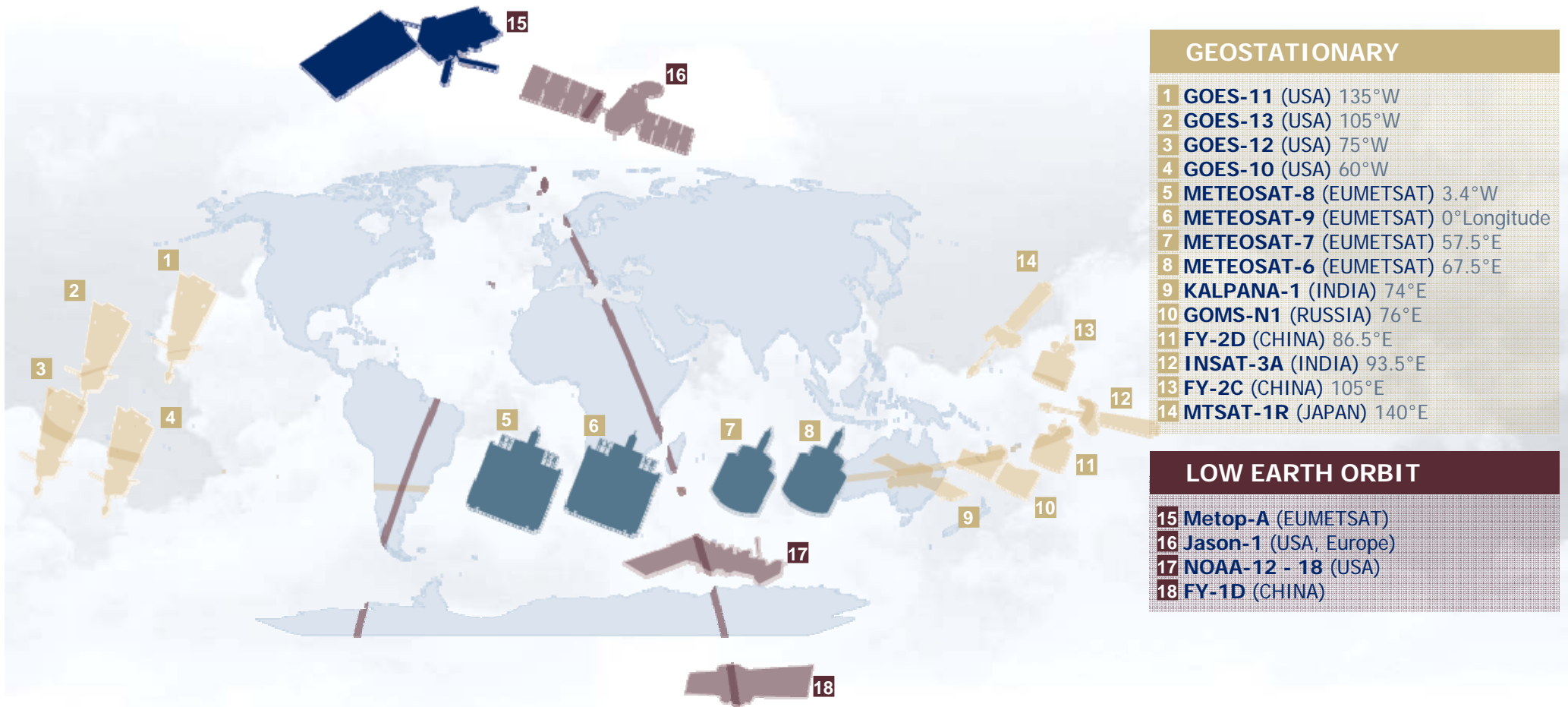


- **Value of weather forecasting to economy:**  
**> 20 times budget of public weather service**
- **Contribution from satellite data:**  
**> 35%**

*[Case for Space Final Report, UKSpace, 2006]*



# Global Satellite System





# What We Do



## National European Meteorological Services



## Private Enterprises, Value Added Services, End-Users

## Operating Agency

Interface with users and  
Overall system design  
and development



 **EUMETSAT**

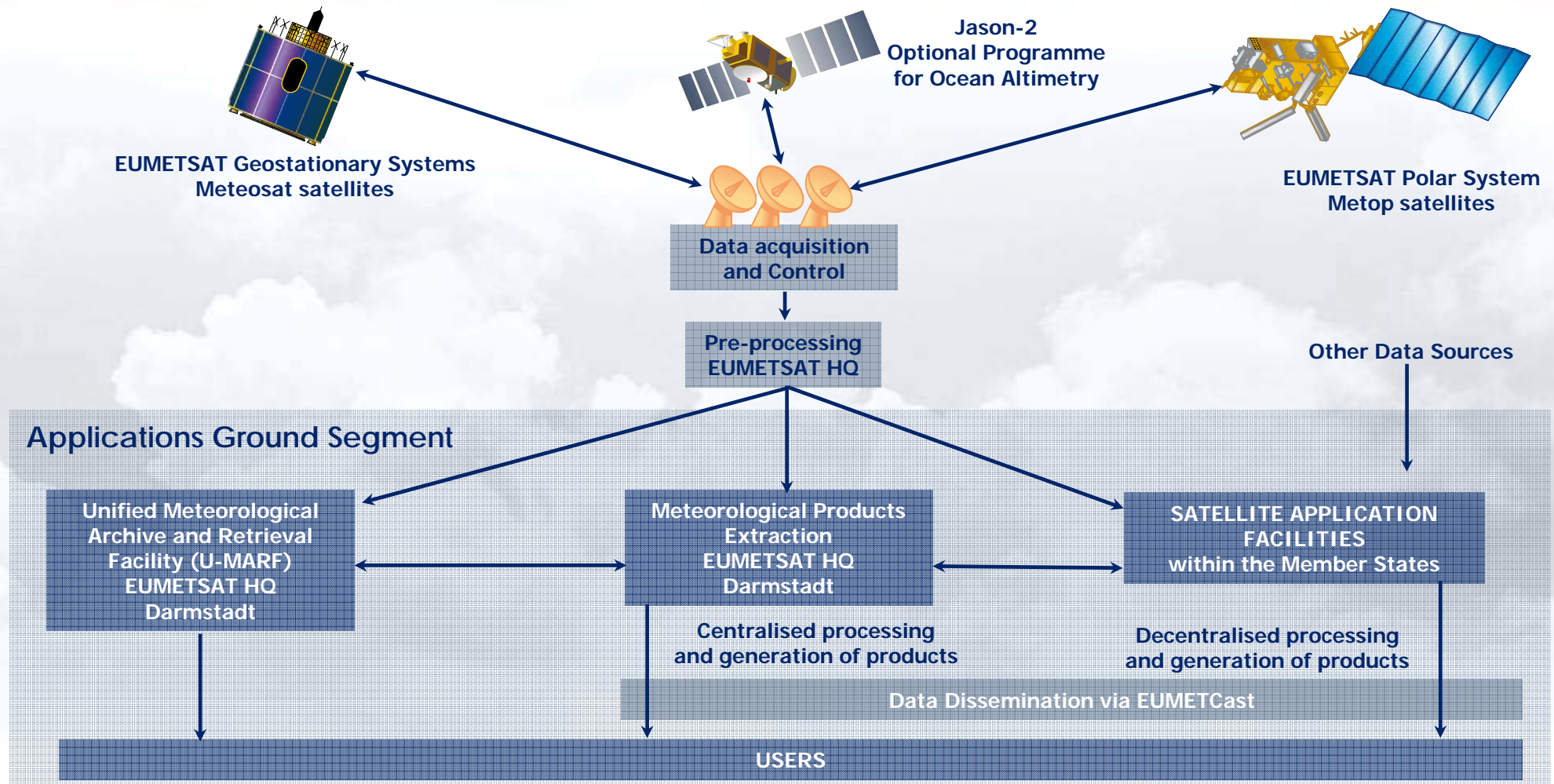


## European Space Industry



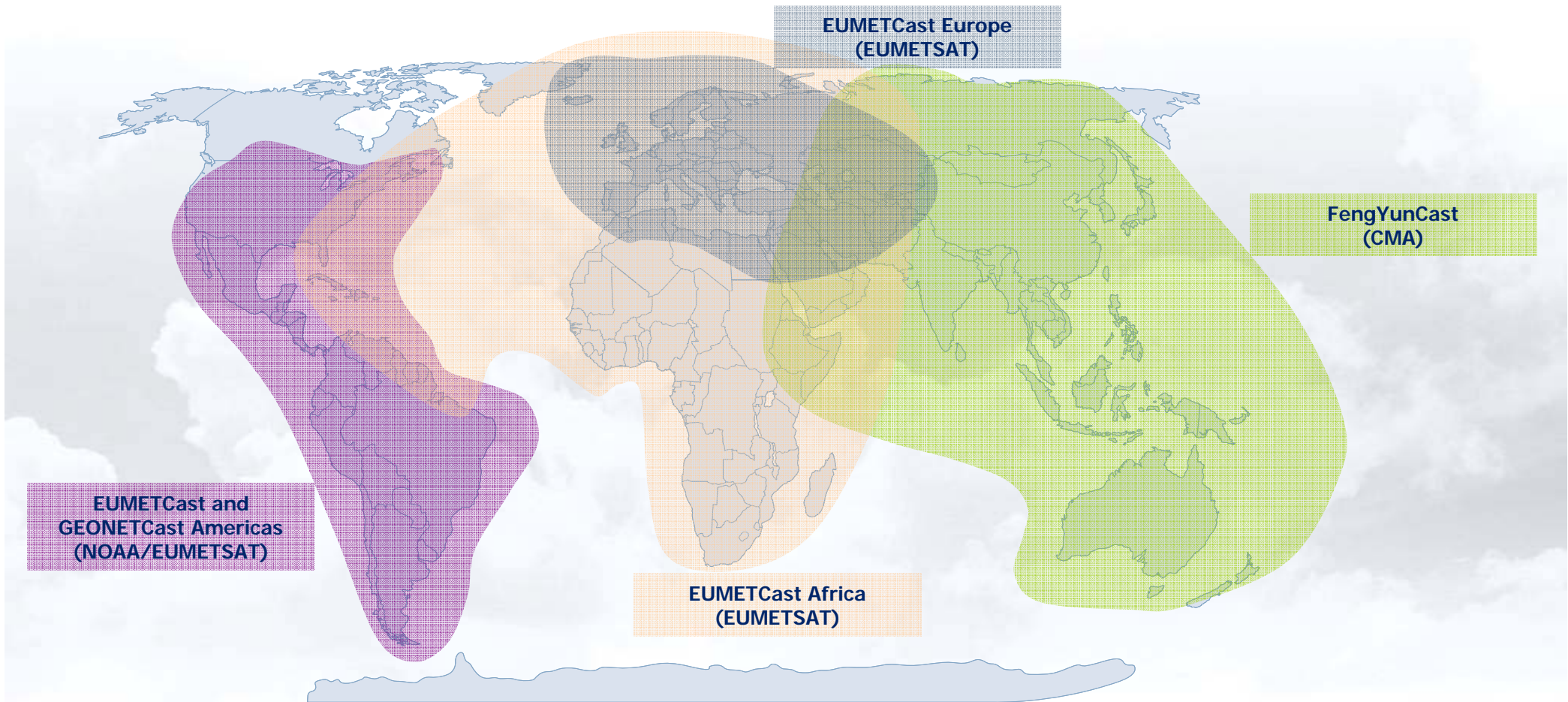
Satellite  
Development and  
procurement agency

# Overview of the EUMETSAT Ground Segment



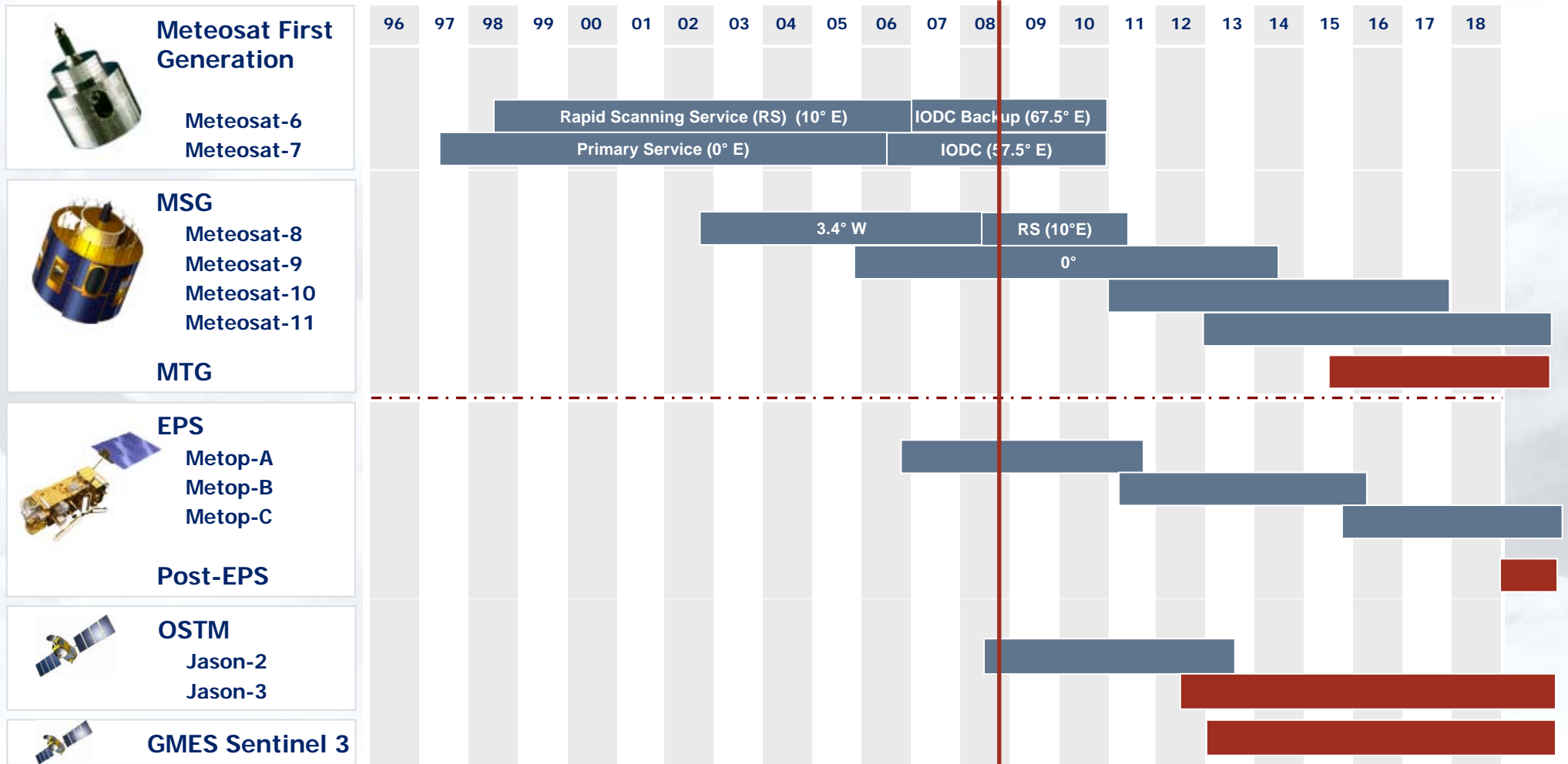


# GEONETCast Coverage





# EUMETSAT Space Segment



# 24 Member States & 6 Cooperating States

## Member States

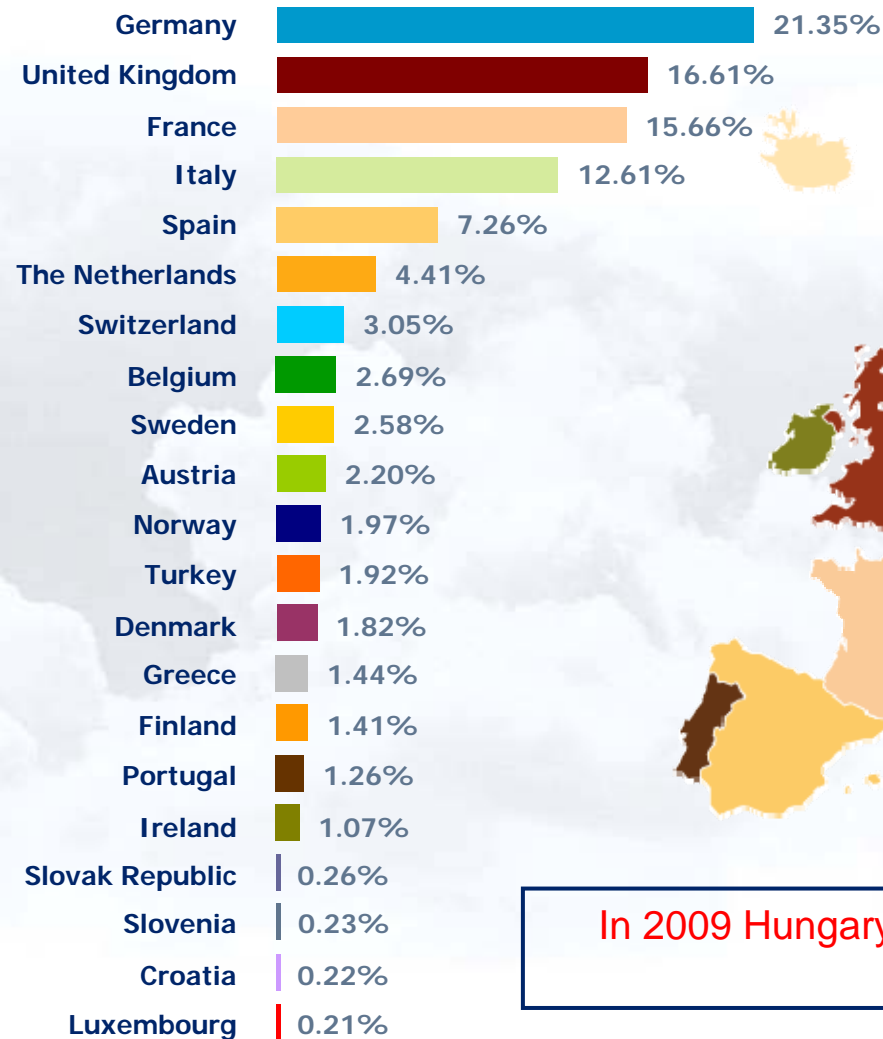


## Cooperating States



\* pending ratification

# Member State Contributions 2008



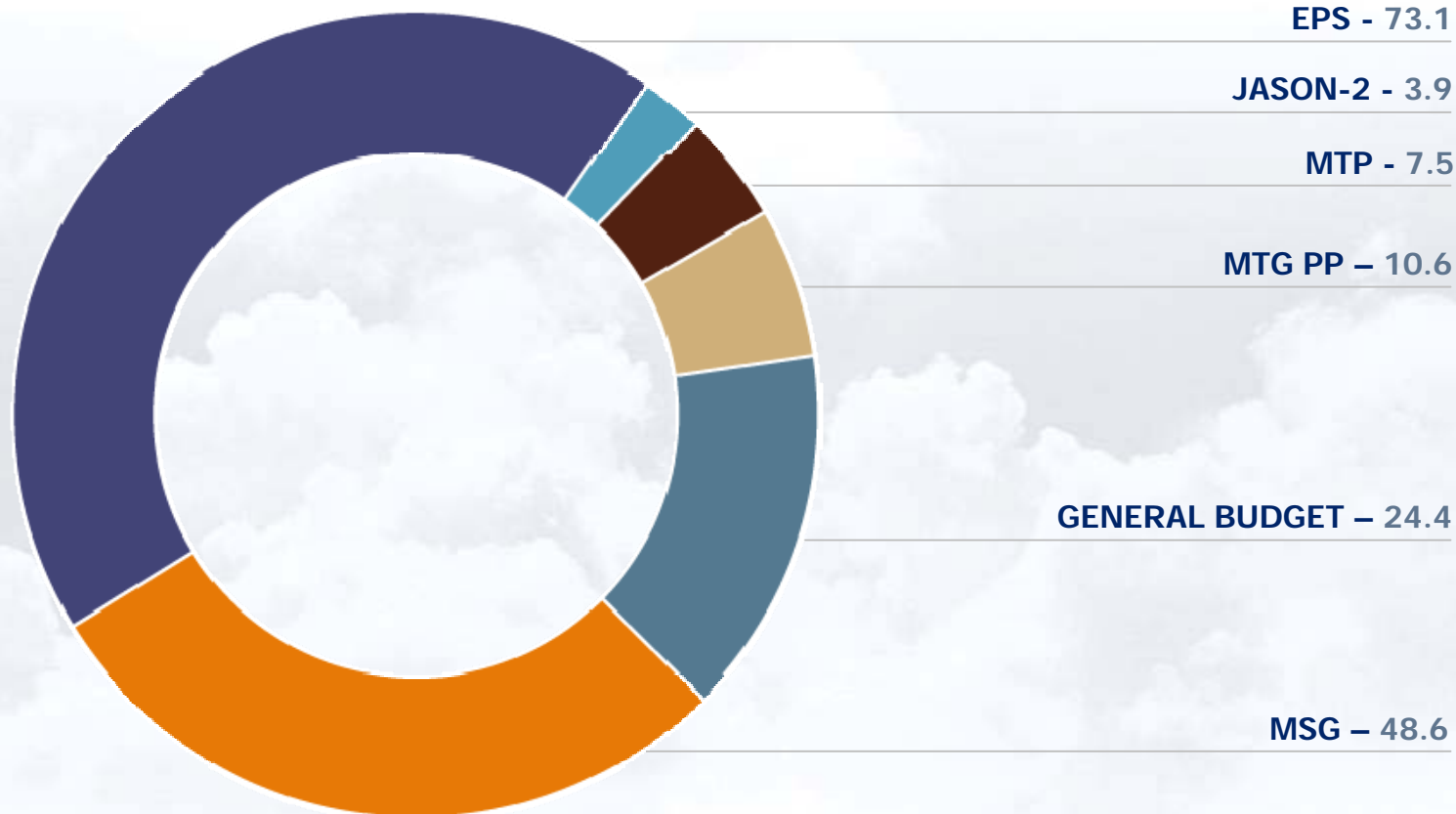
## Cooperating States:

Bulgaria : 0.16%  
 Czech Republic : 0.70%  
 Estonia : 0.07%  
 Hungary : 0.61%  
 Iceland : 0.08%  
 Latvia : 0.09%  
 Lithuania : 0.14%  
 Poland : 1.88%  
 Romania : 0.44%

In 2009 Hungary is full Member State and its contribution key to the EUM  
Mandatory Programmes is 0.71%



# Expenditure 2008



**Total Expenditure 2008: MEUR 168.1**



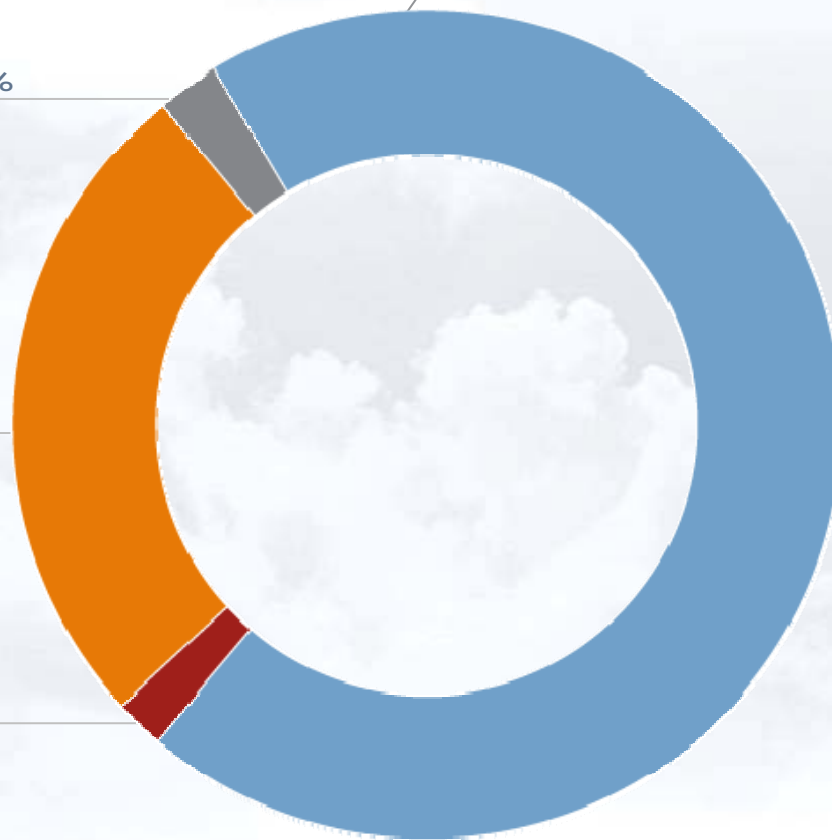
# External and Internal Costs as % of Budgets 2008

Running Costs  
(Budget Chapters 30 & 31) : 4%

Staff Costs  
(Budget Chapter 20) : 24%

Info & Training  
(Budget Chapter 32) : 2%

Total cost 2008: MEUR 168.1



External Contracts : 70%

OPS : 31%

EPS : 18%

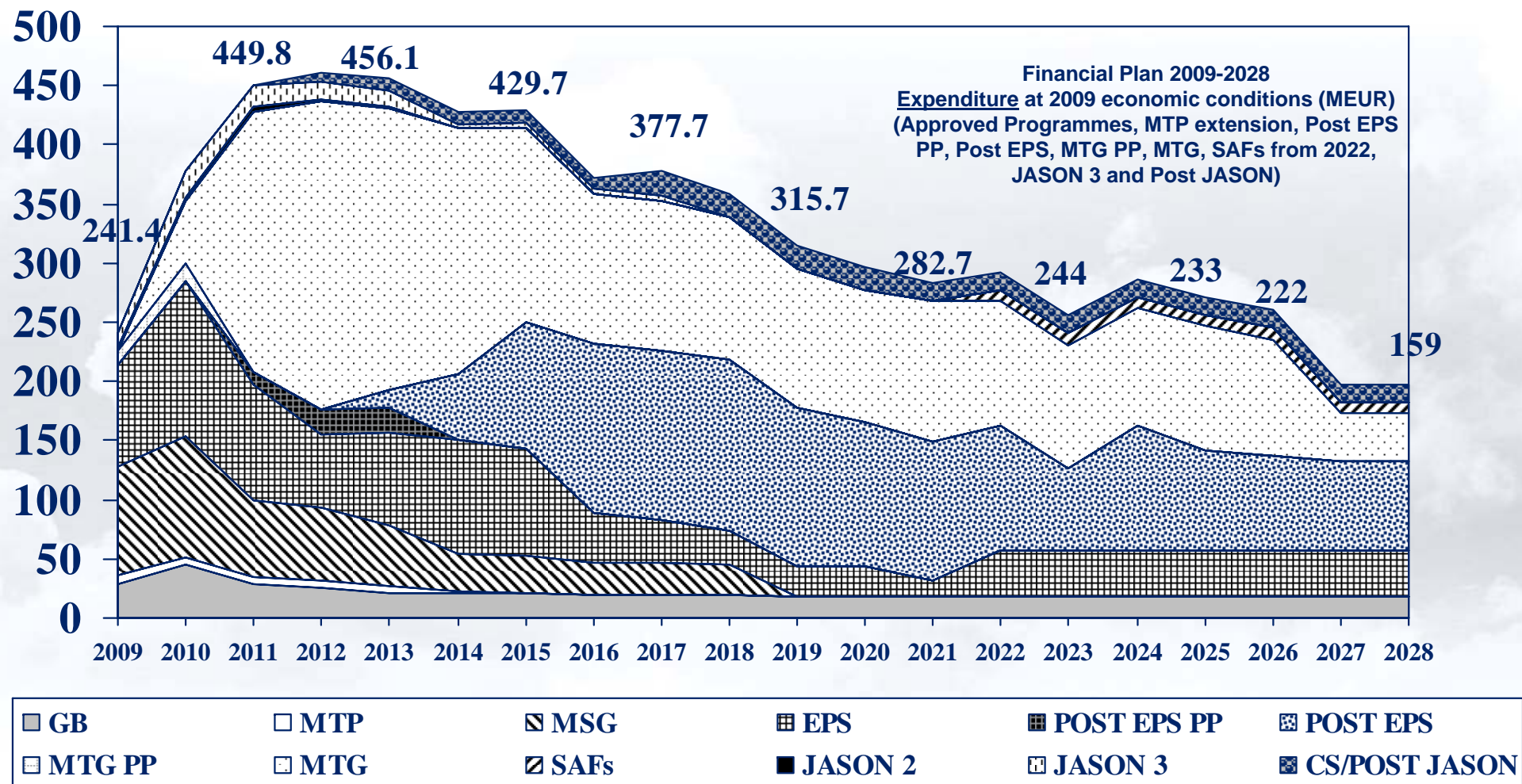
MSG : 12%

Prospective Activities  
& Jason-2 : 4%

General Budget : 3%

MTG PP : 2%

# Long Term expenditure forecast







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**Thank you!**

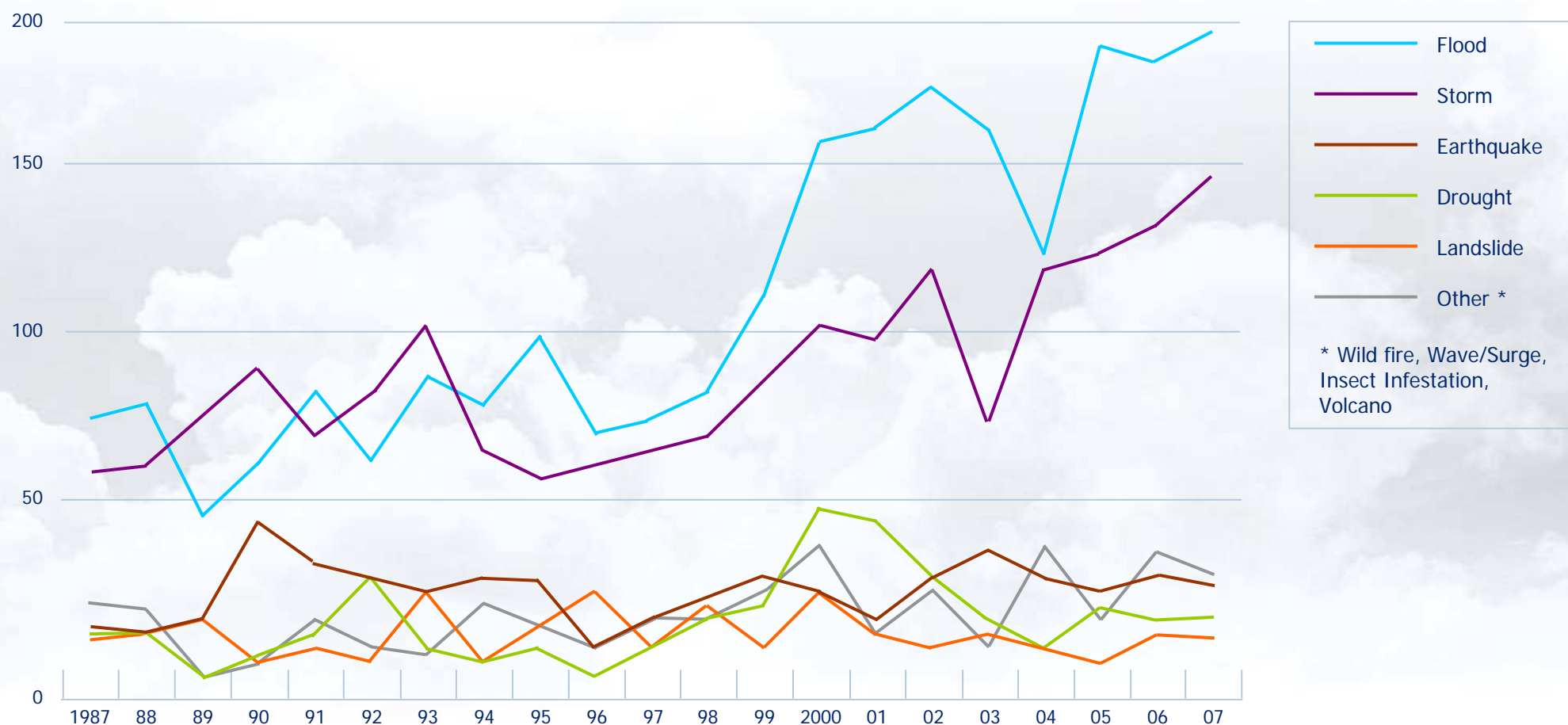


- Spare slides -



# Natural Disasters set off by Severe Weather

Occurrences per year



Source: World Bank

Slide: 20 Presentation to Hungarian Industry - 19 January 2009